

Remarks:

Reconsideration of the application, as amended herein, is respectfully requested.

Claims 1, 5 - 14 and 17 - 21 are presently pending in the application. Claims 1, 5 and 14 have been amended. Claims 2 - 4, 15 and 16 have been canceled, herein.

In item 2 of the above-identified Office Action, claims 1 and 14 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U. S. Patent No. 7,079,281 to Ng et al ("**NG**") in view of U. S. Patent No. 6,002,845 to Honma ("**HONMA**"). In item 3 of the Office Action, claims 2 - 5, 15 and 16 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over **NG** in view of **HONMA**, and further in view of U. S. Patent No. 7,031,545 to Sumitomo et al ("**SUMITOMO**"). In item 4 of the Office Action, claims 6 - 11, 17 - 19 and 20 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over **NG** in view of **HONMA**, and further in view of U. S. Patent No. 6,717,601 to Sanger ("**SANGER**"). In item 5 of the Office Action, claims 12, 13 and 21 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over **NG** in view of **HONMA**, and further in view of U. S. Patent No. 7,079,289 to Loce et al ("**LOCE**").

Applicants respectfully traverse the above rejections, as applied to the amended claims.

More particularly, Applicants have amended claim 1 to recite, among other limitations:

obtaining the asymmetrical distribution of the filter coefficients from a symmetrical filter **by shifting a filter function by fractions of an image point, said fractions being less than 1**, and obtaining further coefficients for the asymmetrical distribution by using the same filter function as used for obtaining symmetrical distributions; [emphasis added by Applicants]

Applicants' independent claims 5 and 14 recite similar limitations, among others. As such, Applicants' independent claims now make clear that not only is an asymmetrical distribution for the filter coefficients used, but also, that this asymmetrical distribution of the filter coefficients is **received by using a symmetrical filter function** (for example, a Gaussian filter) and **then, shifting the coordinates for this function by fractions of an image point** (the total fractions being less than 1) to, therefore, obtain new filter coefficients from a symmetrical filter function that normally is used to obtain a symmetrical distribution of filter coefficients. A person skilled in the art would understand a fraction in a mathematical sense, i.e., the fraction being a part of an image point and, therefore, the fraction being less than one, which means, less than the whole image point. See,

also for example, page 7 of the instant application, lines 22 - 25 and page 12 of the instant application, lines 6 - 11.

The other amendments to claims 1, 5 and 14 are supported by the specification of the instant application, for example, by originally filed claims 2 - 5 and 15 - 16, as well as, by page 11 of the instant application, lines 10 - 19, which states:

The quantized image data is, then, subjected to slight low-pass filtering. As opposed to low-pass filtering that is employed in the known descreening methods and that uses a filter window that covers at least the area of one screen cell 2, the present invention uses a smaller filter window that covers only part of a screen cell 2. The filter coefficients of such a low-pass filter with a filter window that covers 5 x 5 image points can, for example, **be derived as a filter function as a discrete approximation of a two-dimensional Gaussian distribution.** [emphasis added by Applicants]

The combination of references cited in the Office Action does not teach or suggest the above-limitations of Applicants' claims, among other limitations.

More particularly, as acknowledged on page 5 of the Office Action, the **NG** and **HONMA** references do not teach or suggest, among other limitations of Applicants' claims, providing the low-pass filter with an asymmetrical distribution of filter coefficients with respect to the filter window. Rather, with regard to Applicants' former claims 4, 5 and 16, now incorporated into independent claims 1, 5 and 14, respectively, the Office Action pointed to Fig. 6(B) of the

SUMITOMO reference as allegedly curing the deficiencies of the **NG** and **HONMA** references with regard to those claims.

Applicants respectfully disagree. Applicants note that item 3 of the Office Action gives the wrong patent number for the **SUMITOMO** reference, giving the number for a patent to **WANG**, instead. For purposes of responding to the instant Office Action, Applicants have assumed that the **SUMITOMO** reference referred to in item 3 of the Office Action is U. S. Patent No. 7,031,544 and not U. S. Patent No. 7,031, 545, as alleged in the Office Action.

Among other limitations of Applicants' amended claims, the **SUMITOMO** reference does not disclose method for gray value correction, but rather, a method for shifting an image for restoration of an original image. See, for example, col. 1 of **SUMITOMO**, lines 8 - 13. Therefore, the filter shown in Fig. 6b of **SUMITOMO** is not a filter having an asymmetric distribution of filter coefficients, as required by Applicants' claims, but rather, is a vectored filter for shifting image pixels or points. Thus, not all filter coefficients of **SUMITOMO** are unequal to zero. In the asymmetrical distribution of filter coefficients of Applicants' claimed invention, there is always a filter coefficient in every location of the filter that is unequal to zero.

In particular, in Applicants' claimed asymmetrical distribution of filter coefficients the geometric center of the filter is shifted, but the filter coefficients are not shifted. This shifting is performed **by obtaining "new" filter coefficients from the same filter function which provides a symmetrical distribution of filter coefficients**, as recited in Applicants' amended claims (i.e., "obtaining further coefficients for the asymmetrical distribution by using the same filter function as used for obtaining symmetrical distributions").

In order to obtain these new coefficients, the same filter function is used, and shifted coordinates (x, y) are used to shift the center and produce new filter coefficients. Therefore, as defined in Applicants' claims, a shift of a fraction of an image point is used to obtain these new filter coefficients. Applicants' claims even more clearly recite the definition set forth in the specification, i.e., that fractions are meant to be mathematical fractions of an image point (i.e., only part of the image point) and not the image point as a whole. The **SUMITOMO** reference does not teach or suggest, among other limitations of Applicants' claims, shifting the same filter function by a fraction of an image point to obtain further coefficients for the asymmetrical

distribution, as required by Applicants' claims. Rather, to the extent that **SUMITOMO** shows any shifting at all, **SUMITOMO** discloses a shifted distribution of the same filter coefficients **by whole image points** (i.e., and not fractions of an image point). See, for example, col. 5 of **SUMITOMO**, lines 28 - 34, which state:

When the initial image is produced from a picked image degraded by an asymmetric degrading filter, since an image shift has occurred, first, an image shift correction is made by the image corrector 50a. For example, in the case of the degrading filter of FIG. 6(B), since it is desirable that the pre-degradation sharp edge part be situated between {circle around (2)} and {circle around (3)} of FIG. 7(D), **the image shift correction is made by shifting the image rightward one pixel at a time as shown in FIG. 7(E).**

In **SUMITOMO**, this shift is also useful for shifting the image, itself. Thus, as can be seen from the foregoing, Applicants' claims 1, 5 and 14, as with Applicants' former claims 4, 5 and 16, differ from the disclosure of **SUMITOMO** in that, among other differences, Applicants' claims require shifting the coordinates using fractions totaling **less than one whole image point** of a filter function normally producing a symmetrical distribution of filter coefficients to obtain new filter coefficients having an asymmetrical distribution and **non-zero coefficients in every place in the filter window.**

Because the above-discussed limitations of Applicants' claims are not disclosed in the **NG**, **HONMA** or **SUMITOMO** references,

Applicants' amended claims are believed to be patentable over the combination of **NG**, **HONMA** and **SUMITOMO**. The further references cited in the Office Action in combination with the **NG** and **HONMA** references against Applicants' dependent claims do not cure the above-discussed deficiencies of the **NG**, **HONMA** and **SUMITOMO** references.

It is accordingly believed that none of the references, whether taken alone or in any combination, teach or suggest the features of claims 1, 5 and 14. Claims 1, 5 and 14 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claims 1 or 14.

In view of the foregoing, reconsideration and allowance of claims 1, 5 - 14 and 17 - 21 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

The instant Amendment is being filed simultaneously with a Request for Continued Examination (RCE) and its associated fee. Additionally, please consider the present as a petition

for a two (2) month extension of time, and please provide a two (2) month extension of time, to and including, July 27, 2009, to respond to the present Office Action.

The extension fee for response within a period of two (2) month pursuant to Section 1.136(a) in the amount of \$490.00 in accordance with Section 1.17 is enclosed herewith.

Please provide any additional extensions of time that may be necessary and charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner Greenberg Sterner LLP, No. 12-1099.

Respectfully submitted,

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For Applicants

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